

Applicant : Claire Hartmann-Thompson
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In the Claims:

This listing of claims will replace all prior versions and listings of claims in the application:

1. (Canceled).
2. (Currently Amended) The composite material of claim ~~[[1]]~~ 5, in which the polymer matrix includes a polymer having a glass transition temperature at about room temperature or below room temperature.
3. (Currently Amended) ~~The A composite material of claim [[1]]~~ for sensing an analyte, comprising:
a polymer matrix in which the polymer matrix includes a polymer selected from polycarbosilanes, polycarbosiloxanes and polycarbosilazenes; and
a solid particulate filler dispersed in the polymer matrix, the solid particulate filler having functional groups capable of interacting with the analyte.
4. (Currently Amended) The composite material of claim ~~[[1]]~~ 5, in which the solid particulate filler is a functionalized filler selected from clays, synthetic fibers, aluminum hydroxide, calcium silicate, zinc oxide, carbon fiber, glass fiber, silica, alumina, alumina-silica, carbon black, carbon nanotubes, and fullerenes.
5. (Currently Amended) ~~The A composite material of claim [[1]]~~ for sensing an analyte, comprising:
a polymer matrix; and
a solid particulate filler dispersed in the polymer matrix, the solid particulate filler having functional groups capable of interacting with the analyte, and wherein in which the solid particulate filler is a functionalized polyhedral oligomeric silsesquioxane.

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6. (Currently Amended) The composite material of claim [[1]] 5, in which the solid particulate filler is functionalized with hydrogen bond acidic groups.
7. (Currently Amended) ~~The~~ A composite material ~~of claim [[6]]~~ for sensing an analyte, comprising:
a polymer matrix; and
a solid particulate filler dispersed in the polymer matrix, the solid particulate filler having functional groups capable of interacting with the analyte, wherein the solid particulate filler is functionalized with ~~in which the~~ hydrogen bond acidic groups, and wherein the hydrogen bond acidic groups are selected from phenolic and alcoholic alkyl groups.
8. (Currently Amended) ~~The~~ A composite material ~~of claim [[6]]~~ for sensing an analyte, comprising:
a polymer matrix; and
a solid particulate filler dispersed in the polymer matrix, the solid particulate filler having functional groups capable of interacting with the analyte, wherein the solid particulate filler is functionalized with ~~in which the~~ hydrogen bond acidic groups, and wherein the hydrogen bond acidic groups are selected from fluorinated phenols and fluorinated alcoholic alkyls.
9. (Currently Amended) The composite material of claim [[1]] 5, in which the solid particulate filler is functionalized with hydrogen bond basic groups.

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10. (Currently Amended) ~~The A~~ composite material ~~of claim [[9]]~~ for sensing an analyte, comprising:

a polymer matrix; and

a solid particulate filler dispersed in the polymer matrix, the solid particulate filler having functional groups capable of interacting with the analyte, wherein the solid particulate filler is functionalized with ~~in which the~~ hydrogen bond basic groups, and wherein the hydrogen bond basic groups are selected from amine groups, ether groups, cyano groups, nitrogen and oxygen heterocyclic groups, groups containing phosphorous-oxygen double bonds, groups containing a sulfoxide moiety, groups containing a sulfone moiety, groups containing a nitro moiety, and groups containing a nitroso moiety.

11. (Canceled).

12. (Canceled).

13. (Canceled).

14. (Canceled).

15. (Canceled).

16. (Canceled).

17. (Canceled).

18. (Canceled).

19. (Canceled).

20. (Canceled).